

## ***Atlanticus changi* n. sp.**

(Pl. I, fig. 4; II, fig. 8; III, figs. 25, 26, 27, 28, 29)

Most closely allied to *A.ieli* n. sp. from which it differs in the following respects: slightly greater size, considerably larger tegmina, larger and broader pronotum, slenderer cerci, lighter coloration especially of the tegmina, spination of legs, the longer ovipositor and in other minor details. From *magnificus* n. sp. by the much narrower pronotum and tegmina and the form of the cerci; from *hoffmanni* by the greater size, larger tegmina and the shape of the cerci.

**Type** : — ♂, Kuling Mt., Kiangsi, Sept. 13, 1934 (O. PIEL).

**Measurements** in millimeters : body length 26.0 (abdomen deflexed) about 30.0 in normal position; pronotum  $10.5 \times 6.3 \times 3.8$  mm; tegmina  $17.0 \times 7.0 \times 7.0$ ; hind femora  $29.0 \times 5.0$  mm. Type in the Heude Museum.

**Description** : — head typical for *Atlanticus*. Pronotum flat above with a broad "U" shaped suture almost in the middle. Lateral keels rounded, laterad of the suture almost parallel and expanding immediately behind the fore margin to reach that margin and abruptly amplify posteriorly, laterad of the bottom of the "U" shaped suture, to continue caudad moderately diverging to round into the arcuate posterior margin of the pronotum. Lateral lobes typical. Tegmina large, greater than the length of the pronotum and moderately broad and deep.

**Leg spination** as follows : — fore femora with only one small internal tooth on the inferior keel; fore tibiae with 6 pairs of ventral spines and 4 external dorsal spines, the basal one on the distal areas of the tympanum, the other three beyond the middle and evenly spaced. Mesofemora with 1-2 small external teeth on the inferior keel; mesotibiae with 6 pairs of ventral and 2 external and 4 internal spines

on the dorsal surface. Caudal femora with only 2 small internal teeth on the inferior keel. Caudal tibiae with 21-23 external and 18-19 internal dorsal teeth and 9 small widely spaced external and 10 internal spines on the ventral surface. Supra-anal plate with a deep "U" shaped excision and a smaller one between the apical styli of the subgenital plate. Cerci straight, of even width to the small internal median uncinatate tooth, then abruptly acuminate to the acute apex.

**Coloration** : — Head, thorax and abdomen reddish brown with the upper portions of the lateral lobes below the lateral carinae of the pronotum dark shining verona brown with the lower marginal areas typically pale. Central portions of the meso- and metathoracic segments just ventrad of the costal margin of the tegmina with a patch of dark brown. Tegmina pale yellowish brown similar to that in *palpalis* with the veins dull yellowish. Basal radial area between the radial and subcostal veins dark reddish brown or almost piceous. Legs dark purplish grey, the fore tibiae almost piceous, the mesotibiae with piceous areas at the base of the spines. Caudal femora with the typical median line on the outer swollen basal half of the femora, below which is dark verona brown paling to yellowish brown on the ventral margins; above pale yellowish with darker impunctations on the dorsal surface and with 2-3 small brownish spots just above the median line at about the basal third.

**Allotype** : — ♀, same data as the Type but collected July 7, 1935 (O PIEL).

**Measurements** in millimeters : body length 29.0; length to tip of ovipositor 47.0; pronotum 10.0×5.0; tegmina, costal margin 3.0, barely visible from above; caudal femora 29.0×5.0; ovipositor 21.5×1.7 mms. Allotype is unique and deposited in the Heude Museum.

**Description** : — head typical. Pronotum narrower than the Type, the lateral carinae showing the same cons-



triction immediately caudad of the fore margin of the pronotum, thence slightly divergent to the metazona where the lateral keels are almost parallel, rounding posteriorly into the evenly rounded hind margin of the pronotum. Lateral lobes typical. Tegmina very small and barely visibly from above.

**Leg spination** as follows : — fore femora with 2-3 internal teeth on inferior margin; fore tibiae as in the Type. Mesofemora with 1-2 external teeth on the inferior keel; mesotibiae as in the Type. Caudal femora with 5-6 internal teeth on the interior keel. Caudal tibiae with 24-26 external and 22 internal dorsal teeth and 12 external and 9-10 widely spaced weak small spines on the ventral side. Ovipositor moderately long, recurved, with the dorsal valvulae obliquely truncate at the apex which surpasses the apices of the hind femora by approximately 5 mms. Supra-anal plate weakly triangular with a shallow arcuate excision; subgenital plate with a shallow median emargination.

**Paratype** : — 1 ♂, Lushan, Kiangsi, July 27, 1932 (O. PIEL). Measurements in millimeters : body length 30.0; pronotum  $10.5 \times 6.5$ ; tegmina  $16.5 \times 7.0 \times 5.5$ ; caudal femora  $28.0 \times 5.0$  mms.

Paratype slightly larger with the tegmina more reddish brown; otherwise closely similar to the Type.

The writer names this fine species in honor of Dr. KWANG-SO FRANCIS CHANG, of the Department of Biology of St. John's University in Shanghai, who has already considerably advanced our knowledge of the Orthoptera of Central and western China.